

#4450 Store at -20°C

Caspase-4 Antibody



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orders@cellsignal.com

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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: WB	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 45	Source: Rabbit	UniProt ID: #P49662	Entrez-Gene Id: 837
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Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Caspase-4 Antibody detects endogenous levels of total caspase-4 protein. Processing intermediate forms of caspase-4 are observed at 40 kDa and 32 kDa as previously reported (7). The antibody does not cross-react with other caspases.	
Species predicted to react based on 100% sequence homology:	Monkey	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ile125 within the p20 subunit of human caspase-4 protein. Antibodies were purified by protein A and peptide affinity chromatography.	
Background	Caspase-4 (TX/ICH-2/ICE _{rel} II) is a member of the caspase family of proteases that play a key role in the execution of apoptosis and activation of inflammatory cytokines (1-3). Expression of caspase-4 has been observed in most tissues except brain, with highest levels in placenta, lung, spleen, and peripheral blood lymphocytes (PBL). Caspase-4 was originally found to contribute to Fas-mediated apoptosis (4). Several caspases (including caspase-4, caspase-5, and mouse caspase-11 and -12) are most closely related to caspase-1 and are capable of inducing apoptosis when overexpressed but are better characterized in the proteolytic activation of inflammatory cytokines (5). Caspase-4 associates with TRAF6 and is involved in the LPS inducible production of inflammatory cytokines IL-8 and MIP1 in THP-1 cells (6). While caspase-4 and mouse caspase-12 localize to the endoplasmic reticulum (ER) and may be activated by drugs that induce ER stress (7), at least one study suggests that caspase-4 and caspase-12 are not essential for ER stress-induced apoptosis (8).	
Background References	1. Faucheu, C. et al. (1995) <i>EMBO J</i> 14, 1914-22. 2. Kamens, J. et al. (1995) <i>J Biol Chem</i> 270, 15250-6. 3. Munday, N.A. et al. (1995) <i>J Biol Chem</i> 270, 15870-6. 4. Kamada, S. et al. (1997) <i>Oncogene</i> 15, 285-90. 5. Martinon, F. and Tschopp, J. (2007) <i>Cell Death Differ</i> 14, 10-22. 6. Lakshmanan, U. and Porter, A.G. (2007) <i>J Immunol</i> 179, 8480-90. 7. Hitomi, J. et al. (2004) <i>J Cell Biol</i> 165, 347-56. 8. Obeng, E.A. and Boise, L.H. (2005) <i>J Biol Chem</i> 280, 29578-87.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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